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Abstract

Sulfonated aromatic polymers, membrane containing said polymers and a method
 5 for production and use of the same

A sulfonated aromatic polymer comprising the repeating structural unit of the
 formula I



in which Ar^1 and Ar^2 are, independently of one another, divalent aromatic or
 heteroaromatic radicals which are optionally substituted by one or more
 monovalent organic groups which are inert under the conditions of use, R is
 15 hydrogen, an alkali metal or alkaline earth metal ion or an ammonium ion, n is an
 integer from 0 to 3, m is 0, 1 or 2 and X is a $-\text{CO}-$, $-\text{O}-$, $-\text{C}_p\text{H}_{2p}-$, $-\text{C}_p\text{F}_{2p}-$ or $-\text{S}-$
 group, in which p is an integer from 1 to 10, is described.

Membranes with high proton conductivities can be produced from this polymer and
 20 are preferably used in fuel cells.